SECTION 09 22 16.13

DRYWALL STUDS AND TRACK

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\*\* NOTE TO SPECIFIER \*\* MBA Metal Framing; Cold formed non-structural metal drywall stud and track products.  
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This section is based on the products of MBA Metal Framing, which is located at:  
2200 Tempel Dr.  
Libertyville, IL 60048  
Toll Free Tel: 888-248-8076  
Tel: 847-680-7773  
Fax: 847-680-7883  
Email: [request info (sales@mbastuds.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=MBA+Metal+Framing&coid=48069&rep=&fax=847-680-7883&message=RE:%20Spec%20Question%20(09110mba):%20%20&mf=)  
Web: <https://www.mbastuds.com>   
 [ [Click Here](https://www.arcat.com/arcatcos/cos48/arc48069.html) ] for additional information.  
MBA Building Supplies has been providing the highest quality light gauge steel framing and unparalleled service since 1986.  
All framing products are not created equal. At MBA, we are dedicated to manufacturing metal studs, joists, tracks, channels and accessories at or above industry standards. We understand that the structures you build can only be as good as the materials that go into them, which is why we will never compromise product quality.  
While our quality is second to none, it is our service that makes us unique in the industry. MBA operates multiple manufacturing facilities, strategically located to serve your markets quickly and efficiently. MBA maintains the ability to ship orders next-day or even same-day. We've earned a reputation for being the quickest to ship in the industry. We are always available to work with you in meeting the demands of your business.  
It is this dedication to product quality and customer service that has allowed MBA to emerge as a leader in the light gauge steel framing industry. Rest assured that our relentless pursuit to serve you better drives us to further improve our business every day.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Non-Structural Cold Formed Metal Drywall Studs and Track.
    2. Area Separation and Shaftwall Framing.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 05 40 00 - Cold-Formed Metal Framing [05 40 00] - Cold Formed Structural Metal Studs and Track.
    2. Section 06 11 00 - Wood Framing [06 11 00] - Wood Framing and Sheathing.
    3. Section 06 11 00 - Wood Framing [07 21 26] - Wood Blocking and Curbing: Rough wood blocking.
    4. Section 07 21 19 - Foamed-In-Place Insulation [07 21 26] - Thermal Insulation: Insulation within framing members.
    5. Section 09 28 13 - Cementitious Backing Boards [09 29 00] - Gypsum Board.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
    2. ASTM A 1003/A 1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members.
    3. ASTM C 645 - Specification for Non-Load (Axial) Bearing Steel Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board.
    4. ASTM C 754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
    5. ASTM C 955 - Standard Specification for Load-Bearing (Transverse and Axial) Steel Studs, Runners (Tracks), and Bracing or Bridging for Screw Application of Gypsum Panel Products and Metal Plaster Bases.
    6. ASTM E 90 - Standard Test Method for Lavatory Measurements of Airborne Sound Transmission Loss of Building Partitions and Elements.
    7. ASTM E 119 - ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
    8. ASTM E 413 - Classification for Rating Sound Insulation.
    9. American Iron and Steel Institute Publication S100-12 - Specification for the Design of Cold-Formed Steel Structural Members.
    10. 2001 NASPEC for the Design of Cold-Formed Steel Structural Members.
  1. DESIGN / PERFORMANCE REQUIREMENTS

\*\* NOTE TO SPECIFIER \*\* Delete references from paragraphs below that are not actually required; add others as required. All structural framing components and related accessories shall be as published by MBA Metal Framing technical literature, code requirements and load and span tables. Load carrying applications are design dependent and should be reviewed by a design professional familiar with the system and the requirements of the project.

* + 1. Design steel in accordance with American Iron and Steel Institute Publication S100-12 "Specification for the Design of Cold-Formed Steel Structural Members", except as otherwise shown or specified.

\*\* NOTE TO SPECIFIER \*\* 5 PSF minimum design lateral load is required for interior walls by most building codes. Shaftwall framing minimum design lateral load is typically 5 - 15 PSF.

* + 1. Design loads: Design and size components as calculated in accordance with local code.
    2. Design framing systems to withstand design loads without deflections greater than the following:

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + - 1. Interior Non-Load Bearing Walls: Lateral deflection of: L/120.
      2. Interior Non-Load Bearing Walls: Lateral deflection of: L/180.
      3. Interior Non-Load Bearing Walls: Lateral deflection of: L/240.
      4. Interior Non-Load Bearing Walls: Lateral deflection of: L/360.
    1. Design framing system to accommodate deflection of primary building structure and construction tolerances.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraphs if not required for the project.

* + 1. Seismic Loads: Design and size components to withstand seismic loads and sway displacement as calculated in accordance with local code.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraphs if LEED is not applicable.

* + 1. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
       1. Product Data for Credit MR 2.1 and 2.2: For products being recycled, documentation of total weight of project waste diverted from landfill.
       2. Product Data for Credit MR 4.1 and MR 4.2: For products having recycled content, documentation including percentages by weight of post consumer and preconsumer recycled content
          1. Include statement indicating costs for each product having recycled content.
       3. Product Data for Credit MR 5.1 and Credit MR 5.2: Submit data, including location and distance from Project of material manufacturer and point of extraction, harvest or recovery for main raw material.
          1. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.
    2. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum 5 years documented experience.
     2. Installer Qualifications: Company specializing in performing Work of this section with minimum 3 years documented experience.
     3. Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, and manufacturer's installation instructions.
     4. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-structural steel framing, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by, and displaying a classification label from, an independent testing agency acceptable to authority having jurisdiction.
        1. Construct fire-resistance-rated partitions in compliance with tested assembly requirements indicated on the Drawings.
        2. Rated assemblies to be substantiated from applicable testing using the proposed products, by Contractor.
        3. Both metal framing and wallboard manufacturers must submit written confirmation that they accept the other manufacturer's product as a suitable component in the assembly. Acceptance is as follows:
           1. If installation of both products is proper, no adverse effect will result in the performance of one manufacturer's product by the other's products.
           2. Combining products can be substantiated by required assembly tests.

\*\* NOTE TO SPECIFIER \*\* Retain paragraph below where framing is part of STC-rated assemblies. Indicate design designations of specific assemblies on Drawings.

* + 1. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Store products in manufacturer's unopened packaging with identification labels intact until ready for installation.
     2. Keep products dry by storing inside under a roof. If necessary to store material outdoors, it must be stacked on pallets off the ground on a level base and fully protected from the weather.
  2. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: MBA Metal Framing, which is located at: 2200 Tempel Dr.; Libertyville, IL 60048; Toll Free Tel: 888-248-8076; Tel: 847-680-7773; Fax: 847-680-7883; Email: [request info (sales@mbastuds.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=MBA+Metal+Framing&coid=48069&rep=&fax=847-680-7883&message=RE:%20Spec%20Question%20(09110mba):%20%20&mf=); Web: <https://www.mbastuds.com>
         1. MBA Metal Framing; 2200 Tempel Dr., Libertyville, IL 60048.
         2. MBA Metal Framing; 1217 West Grand Avenue, Rainbow City, AL 35906.
         3. MBA Metal Framing; 100 Fireman's Rd. Frackville, PA 17932.
         4. MBA Metal Framing;1080 Bekay Street Dallas, TX 75238

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. DRYWALL STUDS AND TRACK

\*\* NOTE TO SPECIFIER \*\* Edit the following General paragraphs as required and applicable to project requirements. Delete the paragraphs that are not applicable.

* + 1. General Requirements:
       1. Physical properties and load tables have been calculated in conformance with the 2001 NASPEC for the Design of Cold-Formed Steel Structural Members, unless noted otherwise.
       2. Drywall framing members have a protective coating conforming to ASTM spec A 653/A 653M, G-40 min, or equivalent corrosion resistance.
       3. Reference ASTM specification A 1003/A 1003 M table 1 for the universe of allowable coatings for light gauge steel framing.
       4. Drywall framing members are marked with product information per the requirements of ASTM C 645 section 14.
       5. Drywall framing, nonstructural 25 gauge, 22 gauge and 20 gauge, is not permitted in load bearing, axial load greater than 200 lbs or exterior applications with a transverse load greater than 10 PSF. Reference ASTM C 645 section 3.2.2

\*\* NOTE TO SPECIFIER \*\* Review MBA Metal Framing technical literature, code requirements and limiting wall height tables for interior non-structural applications. Drywall framing is not permitted in load bearing non- structural applications with an axial load greater than 200 lbs or in exterior applications with a transverse load greater than 10 PSF. Select from the following product criteria as required for the project requirements. Note that custom studs and track are available on request.

* + 1. Drywall Track: Traditional Full Gauge Flat Drywall Track MBA Building Systems Drywall Track. Non-structural, cold-formed galvanized steel track.

\*\* NOTE TO SPECIFIER \*\* Select the flange length required for the project. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Flange Length: 1-1/4 inch (32 mm).
      2. Flange Length: 2 inch (51 mm).
      3. Flange Length: 3 inch (76 mm).
      4. Flange Length: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select required web depth required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Web Depth: 1-5/8 inch (41 mm) 162 depth.
      2. Web Depth: 2-1/2 inch (64 mm) 250 depth.
      3. Web Depth: 3-1/2 inch (89 mm) 350 depth.
      4. Web Depth: 3-5/8 inch (92 mm) 362 depth.
      5. Web Depth: 4 inch (102 mm) 400 depth.
      6. Web Depth: 5-1/2 inch (140 mm) 550 depth.
      7. Web Depth: 6 inch (152.4 mm) 600 depth.
      8. Web Depth: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the metal design thickness required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Design Thickness: 0.0188 inch (0.48 mm) 18 Mils.
      2. Design Thickness: 0.0312 inch (0.79 mm) 30 Mils.
      3. Design Thickness: 0.0346 inch (0.88 mm) 33 Mils.
      4. Minimum Delivered Thickness: As indicated on Drawings.
    1. Drywall Studs: MBA Building Systems ProSTUD. Non-structural, cold-formed galvanized steel studs with punchouts for plumbing and wiring installations.

\*\* NOTE TO SPECIFIER \*\* Select the designation and criteria information based upon the shape and size stud required for the project. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Flange Width: 1-1/4 inch (32 mm) 125.
      2. Flange Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select required web depth required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Web Depth: 1-5/8 inch (41 mm) 162 depth.
      2. Web Depth: 2-1/2 inch (64 mm) 250 depth.
      3. Web Depth: 3-1/2 inch (89 mm) 350 depth.
      4. Web Depth: 3-5/8 inch (92 mm) 362 depth.
      5. Web Depth: 4 inch (102 mm) 400 depth.
      6. Web Depth: 5-1/2 inch (140 mm) 550 depth.
      7. Web Depth: 6 inch (152.4 mm) 600 depth.
      8. Web Depth: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the metal thickness (gauge) required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Design Thickness: 0.0158 inch (0.40 mm) 15 Mils.
      2. Design Thickness: 0.0190 inch (0.48 mm) 18 Mils.
      3. Design Thickness: As indicated on Drawings.
      4. Minimum Delivered Thickness: As indicated on Drawings.
    1. Drywall Track: MBA Building Systems ProTRACK. Non-structural, cold-formed galvanized steel track.

\*\* NOTE TO SPECIFIER \*\* Select the flange length required for the project. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Flange Length: 1 inch (25 mm) 100.
      2. Flange Length: 1-1/4 inch (32 mm) 125.
      3. Flange Length: 1-1/2 inch (38 mm) 150.
      4. Flange Length: 2 inch (51 mm) 200.
      5. Flange Length: 2-1/2 inch (64 mm) 250.
      6. Flange Length: 3 inch (76 mm) 300.
      7. Flange Length: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select required web depth required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Web Depth: 1-5/8 inch (41 mm) 162 depth.
      2. Web Depth: 2-1/2 inch (64 mm) 250 depth.
      3. Web Depth: 3-1/2 inch (89 mm) 350 depth.
      4. Web Depth: 3-5/8 inch (92 mm) 362 depth.
      5. Web Depth: 4 inch (102 mm) 400 depth.
      6. Web Depth: 5-1/2 inch (140 mm) 550 depth.
      7. Web Depth: 6 inch (152.4 mm) 600 depth.
      8. Web Depth: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the metal thickness (gauge) required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Design Thickness: 0.0188 inch (0.48 mm) 18 Mils.
      2. Design Thickness: 0.0283 inch (0.72 mm) 27 Mils.
      3. Design Thickness: 0.0312 inch (0.79 mm) 30 Mils.
      4. Design Thickness: 0.0346 inch (0.88 mm) 33 Mils.
      5. Minimum Delivered Thickness: As indicated on Drawings.
    1. Slotted Deflection Track: MBA Metal Framing; cold-formed galvanized steel in conformance with AISI's Soecification for Design of Cold-formed Steel Members.
       1. Designation and size as indicated on the drawings.

\*\* NOTE TO SPECIFIER \*\* Select the metal thickness (gauge) required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Design Thickness: 0.0188 inch (0.48 mm) 18 mils.
      2. Design Thickness: 0.0312 inch (0.80 mm) 30 mils.
      3. Design Thickness: 0.0346 inch (0.88 mm) 33 mils.
      4. Design Thickness: 0.0428 inch (1.09 mm) 43 mils
      5. Design Thickness: 0.0538 inch (1.37 mm) 54 mils
      6. Design Thickness: 0.0677 inch (1.72 mm) 68 mils.

\*\* NOTE TO SPECIFIER \*\* Select required web depth required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Web Depth: 2-1/2 inch (64 mm) 250 depth.
      2. Web Depth: 3-5/8 inch (92 mm) 362 depth.
      3. Web Depth: 6 inch (152 mm) 600 depth.
      4. Web Depth: 8 inch (203 mm) 800 depth.
      5. Standard leg 2-1/2 inches (64 mm)
      6. Standard Vertical Slot of 1-1/2 inches (38 mm) throughout leg.
      7. Minimum yield strength for 16 gauge (1.37 mm) and heavier is 50 KSI and minimum yield strength on 18 gauge (1.09 mm) and lighter is 33 ksi.

\*\* NOTE TO SPECIFIER \*\* Shaftwall CT Studs and Tab Track are used in the construction of shaftwalls and stairwalls. Select the designation and criteria information based upon the shape and size component required for the project. If more than one, identify the application or location where used or verify the designation is indicated on the Drawings.

* + 1. Shaftwall Studs and Tab Track: Cold-formed galvanized steel, approved for the use intended based on a current National Evaluation Service Report; MBA Building Systems Shaftwall CT Studs and Tab Track.

\*\*NOTE TO SPECIFIER\*\* Select the designation and criteria information based upon the shape and size component required for the project. If more than one, identify the application or location where used or verify the designation is indicated on the Drawings

* + - 1. Designation and size as indicated on the Drawings.
      2. Designation: Shaftwall CT stud with Tab track, 2-1/2 inches (63.5 mm) leg.
      3. Designation: Shaftwall CT stud with Tab track, 4 inches (102 mm) leg.
      4. Designation: Shaftwall CT stud with Tab track, 6 inches (152 mm) leg.

\*\*NOTE TO SPECIFIER\*\* Select the thickness required and delete the one not required.

* + - 1. Sheet Thickness: 25 gauge.
      2. Sheet Thickness: 20 gauge.

\*\*NOTE TO SPECIFIER\*\* Select the deflection required and delete the one not required.

* + - 1. Deflection Limitation: L/120.
      2. Deflection Limitation: L/180.
      3. Deflection Limitation: L/240.
      4. Deflection Limitation: L/360.
  1. ACCESSORIES
     1. Jamb Studs: MBA Building Systems Jamb Studs. Cold-formed galvanized steel studs with punchouts for plumbing and wiring installations.

\*\* NOTE TO SPECIFIER \*\* Select the designation and criteria information based upon the shape and size stud required for the project. If more than one size is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Flange Width: 3 inch (76 mm) flange width 300.
      2. Flange Width: 3-1/2 inch (89 mm) flange width 350.
      3. Flange Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select required web depth required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Web Depth: 3-5/8 inch (92 mm) 362 depth.
      2. Web Depth: 6 inch (152 mm) 600 depth.
      3. Web Depth: 8 inch (203 mm) 800 depth.
      4. Web Depth: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the metal thickness (gauge) required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Design Thickness: 0.0346 inch (0.88 mm) 33 Mils.
      2. Design Thickness: 0.0451 inch (1.14 mm) 43 Mils.
      3. Design Thickness: 0.0566 inch (1.43 mm) 54 Mils.
      4. Design Thickness: 0.0713 inch (1.81 mm) 68 Mils.
      5. Design Thickness: 0.1017 inch (2.58 mm) 97 Mils.
      6. Minimum Delivered Thickness: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Review MBA Metal Framing technical literature, code requirements and limiting spans for interior and exterior jamb header systems. Select from the following product criteria as required for the project requirements.

* + 1. Jamb and Header System: MBA Building Systems Jamb and Header System. Cold-formed galvanized steel studs with punchouts for plumbing and wiring installations.

\*\* NOTE TO SPECIFIER \*\* Select the designation and criteria information based upon the shape and size stud required for the project. If more than one size is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Jamb Section:
         1. Flange Width: 3 inch (76 mm) flange width 300.
         2. Flange Width: 3-1/2 inch (89 mm) flange width 350.
         3. Flange Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select required web depth required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - * 1. Web Depth: 3-5/8 inch (92 mm) 362 depth.
        2. Web Depth: 6 inch (152 mm) 600 depth.
        3. Web Depth: 8 inch (203 mm) 800 depth.
        4. Web Depth: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the metal thickness (gauge) required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - * 1. Design Thickness 0.0346 inch (0.088 mm) Mils.
        2. Design Thickness: 0.0451 inch (1.14 mm) 43 Mils.
        3. Design Thickness: 0.0566 inch (1.43 mm) 54 Mils.
        4. Design Thickness: 0.0713 inch (1.81 mm) 68 Mils.
        5. Design Thickness: 0.1017 inch (2.58 mm) 97 Mils.
        6. Minimum Delivered Thickness: As indicated on Drawings.
      1. Header Section:
         1. Flange Width: 3 inch (76 mm) flange width 300.
         2. Flange Width: 3-1/2 inch (89 mm) flange width 350.
         3. Flange Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select required web depth required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - * 1. Web Depth: 3-5/8 inch (92 mm) 362 depth.
        2. Web Depth: 6 inch (152 mm) 600 depth.
        3. Web Depth: 8 inch (203 mm) 800 depth.
        4. Web Depth: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the metal thickness (gauge) required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - * 1. Design Thickness: 0.0451 inch (1.14 mm) 43 Mils.
        2. Design Thickness: 0.0566 inch (1.43 mm) 54 Mils.
        3. Design Thickness: 0.0713 inch (1.81 mm) 68 Mils.
        4. Design Thickness: 0.1017 inch (2.58 mm) 97 Mils.
        5. Minimum Delivered Thickness: As indicated on Drawings.
      1. Clip:
         1. Flange Width: 3 inch (76 mm) flange width.
         2. Flange Width: 3-1/2 inch (89 mm) flange width.
         3. Flange Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select required web depth required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - * 1. Depth: 3-5/8 inch (92 mm) 362 depth.
        2. Depth: 6 inch (152 mm) 600 depth.
        3. Depth: 8 inch (203 mm) 800 depth.
        4. Depth: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the metal thickness (gauge) required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - * 1. Design Thickness: 0.0713 inch (0.68 mm) 68 Mils.
        2. Minimum Delivered Thickness: As indicated on Drawings.
    1. Furring Channel: MBA Building Systems Furring Channel for furring masonry walls and ceiling assemblies or in any other typical wall furring or cross-furring or framing application. Custom furring channel is available on request.

\*\* NOTE TO SPECIFIER \*\* Select the flange width required for the project. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Flange Width: 7/8 inch (22 mm) 87.
      2. Flange Width: 1-1/4 inch (32 mm) 125.
      3. Flange Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select required member depth required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Member Depth: 1-1/2 inch (38 mm) 125.
      2. Member Depth: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the metal thickness (gauge) required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Design Thickness: 0.0188 inch (0.47 mm) 18 Mils.
      2. Design Thickness: 0.0283 inch (0.72 mm) 27 Mils.
      3. Design Thickness: 0.0312 inch (0.79 mm) 30 Mils.
      4. Design Thickness: 0.0451 inch (1.15 mm) 43 Mils.
      5. Minimum Delivered Thickness: As indicated on Drawings.
    1. U-Channel:

Select the size required for the project. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Size: 3/4 inches (19.1 mm).
      2. Size: 1-1/2 inches (38 mm).
      3. Size: 2-1/2 inches (64 mm).
      4. Length: Manufacturer's standard length.
      5. Minimum Delivered Thickness: 16 gauge, 0.0538 inch (1.37 mm).
    1. Z-Furring: MBA Building Systems Z-Furring to provide support for insulation while allowing for drywall attachment at masonry or concrete walls.

\*\* NOTE TO SPECIFIER \*\* Select required member depth required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Flange Depth: 1 inch (25 mm) 100.
      2. Flange Depth: 1-1/2 inch (38 mm) 150.
      3. Flange Depth: 2 inch (51 mm) 200.
      4. Flange Depth: 2-1/2 inch (64 mm) 250.
      5. Flange Depth: 3 inch (76 mm) 300.
      6. Flange Depth: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the metal thickness (gauge) required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Design Thickness: 0.0188 inch (0.47 mm) 18 Mils.
      2. Design Thickness: 0.0283 inch (0.72 mm) 27 Mils.
      3. Design Thickness: 0.0312 inch (0.79 mm) 30 Mils.
      4. Design Thickness: 0.0451 inch (1.15 mm) 43 Mils.
      5. Minimum Delivered Thickness: As indicated on Drawings.
    1. Angle: MBA Building Systems Angle for use in a variety of applications.

\*\* NOTE TO SPECIFIER \*\* Select required member depth required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Leg Length: 7/8 inch (22 mm) by 1-3/8 inch (35 mm).
      2. Leg Length: 1-1/2 inch (38 mm) by 1-1/2 inch (38 mm).
      3. Leg Length: 2 inch (51 mm) by 2 inch (51 mm).
      4. Leg Length: 3 inch (76 mm) by 3 inch (76 mm).
      5. Leg Length: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the metal thickness (gauge) required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Design Thickness: 0.0188 inch (0.47 mm) 18 Mils.
      2. Design Thickness: 0.0283 inch (0.72 mm) 27 Mils.
      3. Design Thickness: 0.0312 inch (0.79 mm) 30 Mils.
      4. Design Thickness: 0.0451 inch (1.15 mm) 43 Mils.
      5. Design Thickness: 0.0566 inch (1.44 mm) 54 Mils.
      6. Design Thickness: 0.0713 inch (1.81 mm) 68 Mils.
      7. Minimum Delivered Thickness: As indicated on Drawings.
    1. Flat Strapping: MBA Building Systems Flat strapping is used for lateral bracing, joist bridging and diagonal bracing to prevent racking.

\*\* NOTE TO SPECIFIER \*\* Select required member depth required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Strap Width: 1 inch (25 mm).
      2. Strap Width: 2 inch (51 mm).
      3. Strap Width: 3 inch (76 mm).
      4. Strap Width: 4 inch (102 mm).
      5. Strap Width: 5 inch (127 mm).
      6. Strap Width: 6 inch (152 mm).
      7. Strap Width: 7 inch (178 mm).
      8. Strap Width: 8 inch (203 mm).
      9. Strap Width: 9 inch (229 mm).
      10. Strap Width: 10 inch (254 mm).
      11. Strap Width: 11 inch (279 mm).
      12. Strap Width: 12 inch (305 mm).
      13. Strap Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the metal thickness (gauge) required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Design Thickness: 0.0188 inch (0.47 mm) 18 Mils.
      2. Design Thickness: 0.0283 inch (0.72 mm) 27 Mils.
      3. Design Thickness: 0.0312 inch (0.79 mm) 30 Mils.
      4. Design Thickness: 0.0346 inch (0.88 mm) 33 Mils.
      5. Design Thickness: 0.0451 inch (1.15 mm) 43 Mils.
      6. Design Thickness: 0.0566 inch (1.44 mm) 54 Mils.
      7. Design Thickness: 0.0713 inch (1.81 mm) 68 Mils.
      8. Design Thickness: 0.1017 inch (2.58 mm) 97 Mils.
      9. Design Thickness: 0.1243 inch (3.16 mm) 118 Mils.
      10. Minimum Delivered Thickness: As indicated on Drawings.
    1. Resilient Channel: MBA Building Systems Resilient Channel for use to reduce sound transmission between the gypsum board and the steel framing member.
       1. Web Width: 1.25 inch (32 mm).
       2. Leg Base: 1/2 inch (12.7 mm).
       3. Leg Height: 1/2 inch (12.7 mm).

\*\* NOTE TO SPECIFIER \*\* Select the metal thickness (gauge) required and delete those not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Design Thickness: 0.0188 inch (0.47 mm) 18 Mils.
      2. Design Thickness: 0.0312 inch (0.79 mm) 30 Mils.
    1. CRC Clip: MBA Building Systems CRC clips for use to secure cold rolled channel to individual framing members. Each clip is pre-punched ready for quick and easy installation.

\*\* NOTE TO SPECIFIER \*\* Select required member length required and delete the one not required. If more than one is used, identify the application or location for each on the Drawings or on the schedule at the end of this Section.

* + - 1. Leg Length: 1.5 inch (38 mm) by 3.25 (83 mm).
      2. Leg Length: 1.5 inch (38 mm) by 5.25 (133 mm).
      3. Design Thickness: 0.0566 inch (1.44 mm) 54 Mils.
  1. MATERIALS
     1. Cold-Formed Steel Sheet: Complying with ASTM A 1003/A 1003M; unless indicated otherwise.
     2. Galvanized Coating: CP40 or equivalent coating weight minimum, complying with ASTM C 645.
  2. FABRICATI0N
     1. General: Framing components may be pre-assembled into panels prior to erecting.
     2. Fabricate panels square, with components attached in a manner so as to prevent racking or distortion.
     3. Cut all framing components squarely for attachment to perpendicular members, or as required for an angular fit against abutting members. Hold members positively in place until properly fastened.
     4. Provide insulation as specified elsewhere in all double jamb studs and double header members, which will not be accessible to the insulation contractor.
     5. Fasteners: Fasten components using self-tapping screws or welding.

1. EXECUTION
   1. EXAMINATION
      1. Before beginning installation, verify that substrate conditions previously installed under other sections are acceptable for installation of metal framing in accordance with manufacturer's installation instructions.
      2. Verify that rough-in utilities and chases are in correct locations and do not interfere with framing placement.
      3. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. General Erection Requirements:
         1. Install cold-formed framing in accordance with requirements of ASTM C 754.
      2. Wall Framing:
         1. Erect framing and panels plumb, level and square in strict accordance with the Drawings and the approved shop drawings.
         2. Handle and lift prefabricated panels in a manner so as not to cause distortion in any member.
         3. Anchor runner track securely to the supporting structure. Install concrete anchors only after full compressive strength has been achieved.
         4. Provide a sill sealer or gasket barrier between all concrete and steel connections.
         5. Butt all track joints. Securely anchor abutting pieces of track to a common structural element, or butt-weld or splice them together.
         6. Align and plumb studs, and securely attach to the flanges or webs of both upper and lower tracks except when vertical movement is specified.
         7. Frame wall openings to include headers and supporting studs as shown in the Drawings.
         8. Coordinate erection of studs with requirements of door frames, window frames, and other similar openings.
         9. Install jack studs or cripples below window sills, above window and door heads, at freestanding stair rails and elsewhere to furnish support, securely attached to supporting members.
         10. Attach wall stud bridging in a manner to prevent stud rotation. Space bridging rows according to manufacturer's recommendations.
         11. Coordinate installation of wood bucks, anchors, and wood blocking with electrical and mechanical work to be placed within or behind stud framing.
         12. Provide temporary bracing until erection is completed.
         13. Provide stud walls at locations indicated on Drawings as "shear walls" for frame stability and lateral load resistance.
         14. Where indicated in the Drawings, provide for structural vertical movement using a vertical slide clip or other means in accordance with manufacturer's recommendations.
         15. Maintain clearance under structural building members to avoid deflection transfer to studs. Install extended leg ceiling runners.
         16. Coordinate placement of insulation in stud spaces after stud frame erection.

\*\* NOTE TO SPECIFIER \*\* Include the following paragraphs for shaft wall construction. Delete if not required.

* + 1. Shaftwall Framing Installation:
       1. Attach runners plumb with one another, long leg on shaft side, at floor and structure overhead using power-driven fasteners located 2 inches (51mm) from each end and 24 inches (610mm) o.c. between. Cut jamb runners or studs not less than 3/8 inch (10mm) nor more than 1/2 inch (13mm) less than distance from floor to structure above. Position runners or studs at wall structural jambs. Do not attach to floor or overhead runners.
       2. With steel frame construction attach runners to beams and runners or studs to columns prior to fireproofing application. Where fireproofing is more than 1 inch (25 mm) thick, position Z-Clips at jambs no more than 4 inches (102 mm) from floor and structure above and no more than 24 inches (610 mm) o.c. between. Attach Z-Clips to steel frame with power-driven fasteners. Attach runners and studs to Z-Clips with two 1/2 inch (13 mm) type S-12 screws. Remove excess fireproofing from insides of runners and studs before installing liner boards.
       3. Cut liner boards 1 inch (25 mm) less than distance from floor to structure above; erect vertically into floor and overhead runners, and into jamb runner or stud. Where wall height exceeds maximum length of liner board, position board end joints within upper and lower 1/3 of height from floor to structure above; stagger joints in adjacent boards. Achieve tight fit at mating board ends.
       4. Cut shaftwall studs not less than 3/8 inches (10 mm) nor more than 1/2 inch (13 mm) less than distance from floor to structure above. Fit first shaftwall stud over leading edge of first liner board. Install remaining liner boards and shaftwall studs. Do not attach shaftwall Studs to runners.
       5. Do not splice shaftwall studs or studs. For wall heights exceeding 16 feet (4877 mm) attach shaftwall studs, studs, or jamb runners to floor and overhead runners with two 1/2 inch (13 mm) Type S-12 screws on shaft side and one on floor side. Fit liner boards tightly into studs or jamb runners. Fit studs or jamb runners tightly over liner boards.
       6. Corners and intersections: Position jamb runners or studs at corners and intersections.
       7. Door openings: Install studs plumb at each jamb of swinging doors. Install jamb struts plumb with long legs on shaft side at each jamb of elevator doors. Attach jamb strut studs to floor and overhead runners with two 3/8 inch (10 mm) Type S-12 screws pan head on shaft side and one on floor side. Attach strut studs to door jamb anchors with two 1/2 inch (13 mm) Type S-12 pan head screws per anchor.
       8. For walls above doors miter-cut runners legs and position runner horizontally to fit tightly between strut studs to serve as opening head. At each jamb extend runner upward into overhead runner. Attach runner webs to strut stud webs with 3/8 inch (10 mm) Type S-12 screws spaced not more than 12 inch (305 mm) oc, 2 inches (51 mm) above opening head, and not more than 4 inches (102 mm) from overhead runner, using not less than 3 screws per jamb. Install shaftwall studs horizontally at not less than 24 inches (610 mm) o.c.; attach to each mitered jamb runner oner 3/8 inch (10rmm) Type S-12 screw shaft side and one floor side.
       9. Provide additional liner boards, gypsum shims and fillers at elevator door frames as necessary to maintain fire integrity of the tested labeled frame construction. Construct opening in conformance with frame manufacturer's fire test report; secure copy of fire test report from frame manufacturer and maintain on site for elevator inspector.
       10. Small openings: Frame openings with E-Studs or J-Runners at jambs; frame heads and sills with J-Runners. Attach head and sill J-Runners to jambs with two 3/8 inch (10 mm) Type S-12 screws on shaft side and one on floor side.
       11. Do not exceed allowable stresses in shaftwall studs, studs or runners.
  1. ERECTION TOLERANCES

\*\* NOTE TO SPECIFIER \*\* Include erection tolerances when important to the Project. Tolerances required vary depending on nature of subsequent construction of finish. Flat, smooth surface finishes require rigid erection tolerances.

* + 1. Section 01 40 00 - Quality Requirements.
    2. Maximum Variation From Indicated Position: 1/8 inch in 10 feet (3 mm in 3 m).
    3. Maximum Variation From Plumb: 1/8 inch in 10 feet (3 mm in 3 m).
  1. PROTECTION
     1. Protect installed products until completion of project.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION